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## FIG.1

1 ATGCTAACCTCCC GTT GAGCCC GAGTC GAGCAGGC TACAAGGAGCTT GCGTC GACC  
\*\*\*\*\*  
2 ATGCTAACCTCCC GTT GAGCCC GAGTC GAGCAGGC TACAAGGAGCTT GCGTC GACC  
\*\*\*\*\*  
61 CTCGAGAACTCCACCC TCTT GAGCAGC ACCCTGAATACCGACGGCTCTCCAGGT CGTC  
\*\*\*\*\*  
61 CTCGAGAACTCCACCC TCTT GAGCAGC ACCCTGAATACCGACGGCTCTCCAGGT CGTC  
\*\*\*\*\*  
121 TCCGTTCCC GAGCGCGT TATCCAGTTCCGTGTCGTTGGGAGAACGACAAGGGCAGGTT  
\*\*\*\*\*  
121 TCCGTTCCC GAGCGCGT TATCCAGTTCCGTGTCGTTGGGAGAACGACAAGGGCAGGTT  
\*\*\*\*\*  
181 CAGATCAACCGCGGTTACCGT GTCAGTTCAACTCCGCTCTCGTCCCTACAAGGGTGGT  
\*\*\*\*\*  
181 CAGATCAACCGCGGTTACCGT GTCAGTTCAACTCCGCTCTCGTCCCTACAAGGGTGGT  
\*\*\*\*\*  
241 CTCCGTTCCACCC TCCGTCAACCTTCTATCCTGAAGTTCCCTGGCTTCGAGCAGATC  
\*\*\*\*\*  
241 CTCCGTTCCACCC TCCGTCAACCTTCTATCCTGAAGTTCCCTGGCTTCGAGCAGATC  
\*\*\*\*\*  
301 TTCAAAAATGCTCTCACAGGAC [ ← Splicing site  
\*\*\*\*\*  
301 TTCAAAAATGCTCTCACAGGACGTGCGTAACCGTTACTTCATTGGATGTTGCCAAGAGT  
323 → ] TAAACATGGTGGTGGCAAGGGTGGTCCGACTTCGACCCCCAAGG  
\*\*\*\*\*  
361 ACTAATTGGTATTAGTAAACATGGTGGTGGCAAGGGTGGTCCGACTTCGACCCCCAAGG  
\*\*\*\*\*  
368 GCAAGTCTGACTCTGAAATT CGTCGCTTCTGTACCGCTTCTGACTGAGCTCTGCAAGC  
\*\*\*\*\*  
421 GCAAGTCTGACTCTGAAATT CGTCGCTTCTGTACCGCTTCTGACTGAGCTCTGCAAGC  
\*\*\*\*\*  
428 ACATCGGCGCGGACACTGACCTTCCGCTGGT GATATCGGTGTTACTGCCGTGAGGTTG  
\*\*\*\*\*  
481 ACATCGGCGCGGACACTGACCTTCCGCTGGT GATATCGGTGTTACTGCCGTGAGGTTG  
\*\*\*\*\*  
488 GTTCCTT CCGCCAGTACCGCAGGATCCGCAACCAGTGGGAGGGTGTCTCACTGGCA  
\*\*\*\*\*  
541 GTTCCTT CCGCCAGTACCGCAGGATCCGCAACCAGTGGGAGGGTGTCTCACTGGCA  
\*\*\*\*\*  
548 AGGGTGGCAGCTGGGTGGTAGCTGATCCGCCCTGAAGCCACTGGGATACGGTGTGTCT  
\*\*\*\*\*  
601 AGGGTGGCAGCTGGGTGGTAGCTGATCCGCCCTGAAGCCACTGGGATACGGTGTGTCT  
\*\*\*\*\*  
608 ACTACGTT CAGCACATGATCAAGCACGTTACCGTGGAAAGGAGTCCTCGCAGGCAAGC  
\*\*\*\*\*  
661 ACTACGTT CAGCACATGATCAAGCACGTTACCGTGGAAAGGAGTCCTCGCAGGCAAGC

## FIG.2

668 GTGTCGCCATCTCCGGCTCCGGTAACGTTGCCAGTACGCCGCTCTCAAGGTATCGAGC  
\*\*\*\*\*  
721 GTGTCGCCATCTCCGGCTCCGGTAACGTTGCCAGTACGCCGCTCTCAAGGTATCGAGC  
728 TCGGTGGTCCGTTGTCCTCCCTTCCGACTCCAAGGGCTCTCTCATTGTCAAGGATGAGT  
\*\*\*\*\*  
781 TCGGTGGTCCGTTGTCCTCCCTTCCGACTCCAAGGGCTCTCTCATTGTCAAGGATGAGT  
788 CCGCTTCTTCACCCCTGAAGAGATGCCCTCATTGCCGACCTCAAGGTTGCCCGCAAGC  
\*\*\*\*\*  
841 CCGCTTCTTCACCCCTGAAGAGATGCCCTCATTGCCGACCTCAAGGTTGCCCGCAAGC  
848 AACTCTCCGAGCTGCCACCTCCCTCCGTTGCCGGCAAGTTCACCTACATCCCCGATG  
\*\*\*\*\*  
901 AACTCTCCGAGCTGCCACCTCCCTCCGTTGCCGGCAAGTTCACCTACATCCCCGATG  
908 CTCGCCCTTGGACCAACATTCCCGCAAGTTCGAGGTTGCTCTCCCTCTGCCACTCAGA  
\*\*\*\*\*  
961 CTCGCCCTTGGACCAACATTCCCGCAAGTTCGAGGTTGCTCTCCCTCTGCCACTCAGA  
968 ACGAAGTCTCCGGCGAGGAAGCCGAGCACCTCATCAAGTCCGGTGTCCGCTATATTGCTG  
\*\*\*\*\*  
1021 ACGAAGTCTCCGGCGAGGAAGCCGAGCACCTCATCAAGTCCGGTGTCCGCTATATTGCTG  
1028 AGGGTTCCAACATGGGTTGCACCCAGGCCATCGACATCTTGAGGCTACCGCAACG  
\*\*\*\*\*  
1081 AGGGTTCCAACATGGGTTGCACCCAGGCCATCGACATCTTGAGGCTACCGCAACG  
1088 CCAACCCCGCGATGCCATCTGGTACGCCCTGGTAAAGCCGCCAACGCTGGTGGTTCG  
\*\*\*\*\*  
1141 CCAACCCCGCGATGCCATCTGGTACGCCCTGGTAAAGCCGCCAACGCTGGTGGTTCG  
1148 CCGTCTCTGGTCTTGAGATGGCTCAGAACTCTGCTCGTCTCCTGGACATCCGAGGAGG  
\*\*\*\*\*  
1201 CCGTCTCTGGTCTTGAGATGGCTCAGAACTCTGCTCGTCTCCTGGACATCCGAGGAGG  
1208 TCGATGCTCGCCTCAAGGGCATCGGAGGACTGCTTCAGAACGGTCTCGAGACTGCTC  
\*\*\*\*\*  
1261 TCGATGCTCGCCTCAAGGGCATCGGAGGACTGCTTCAGAACGGTCTCGAGACTGCTC  
1268 AGAAGTTGCTACTCCTGCCAAGGGCATCGGAGGACTGCTTCAGAACGGTCTCGAGACTGCTC  
\*\*\*\*\*  
1321 AGAAGTTGCTACTCCTGCCAAGGGCATCGGAGGACTGCTTCAGAACGGTCTCGAGACTGCTC  
1328 CCGGTTTCACCAAGGTGCCGAGGCCATGAAGGACCAGGGTGACTGGTGGTGA  
\*\*\*\*\*  
1381 CCGGTTTCACCAAGGTGCCGAGGCCATGAAGGACCAGGGTGACTGGTGGTGA

FIG.3

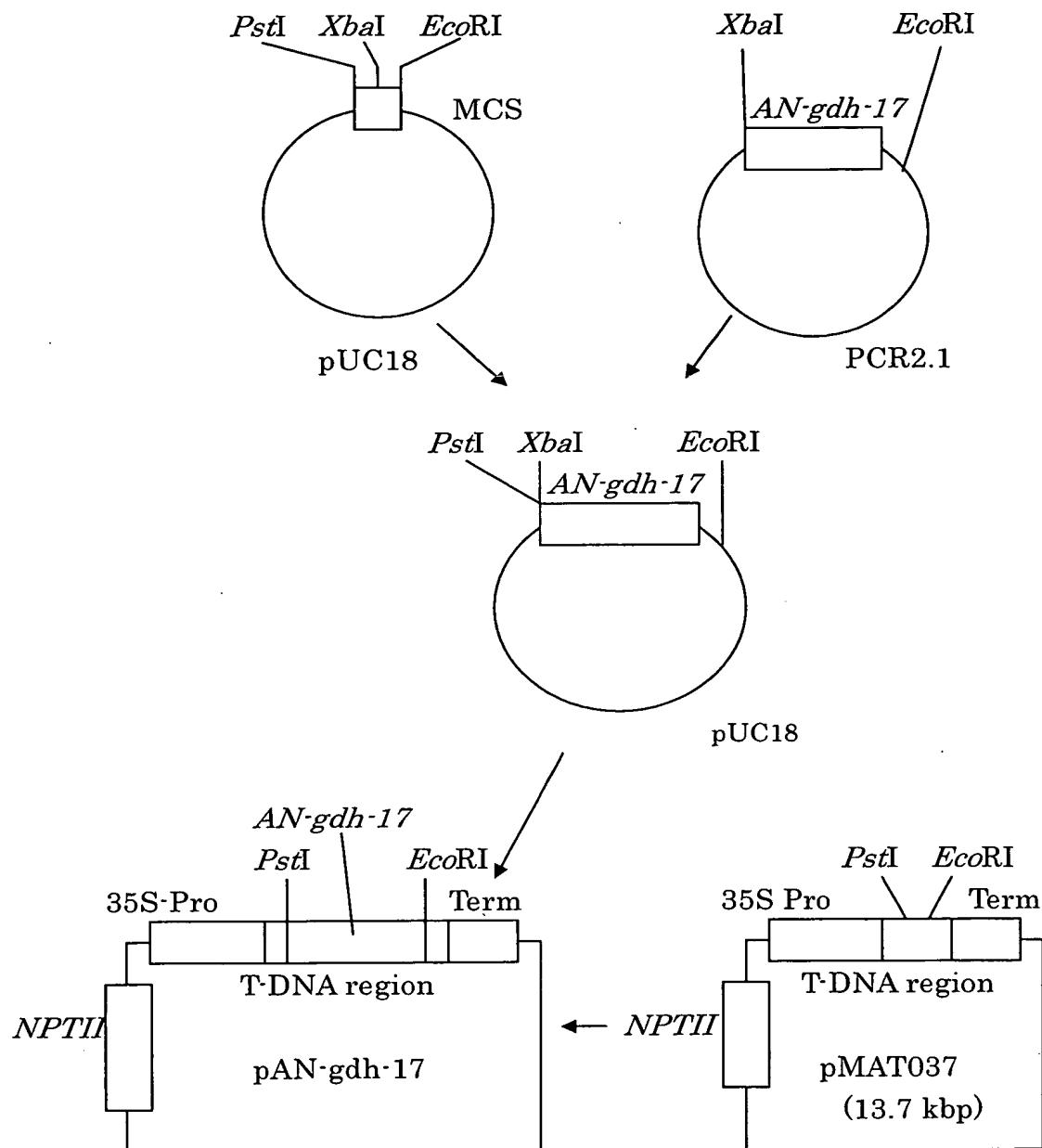


FIG.4

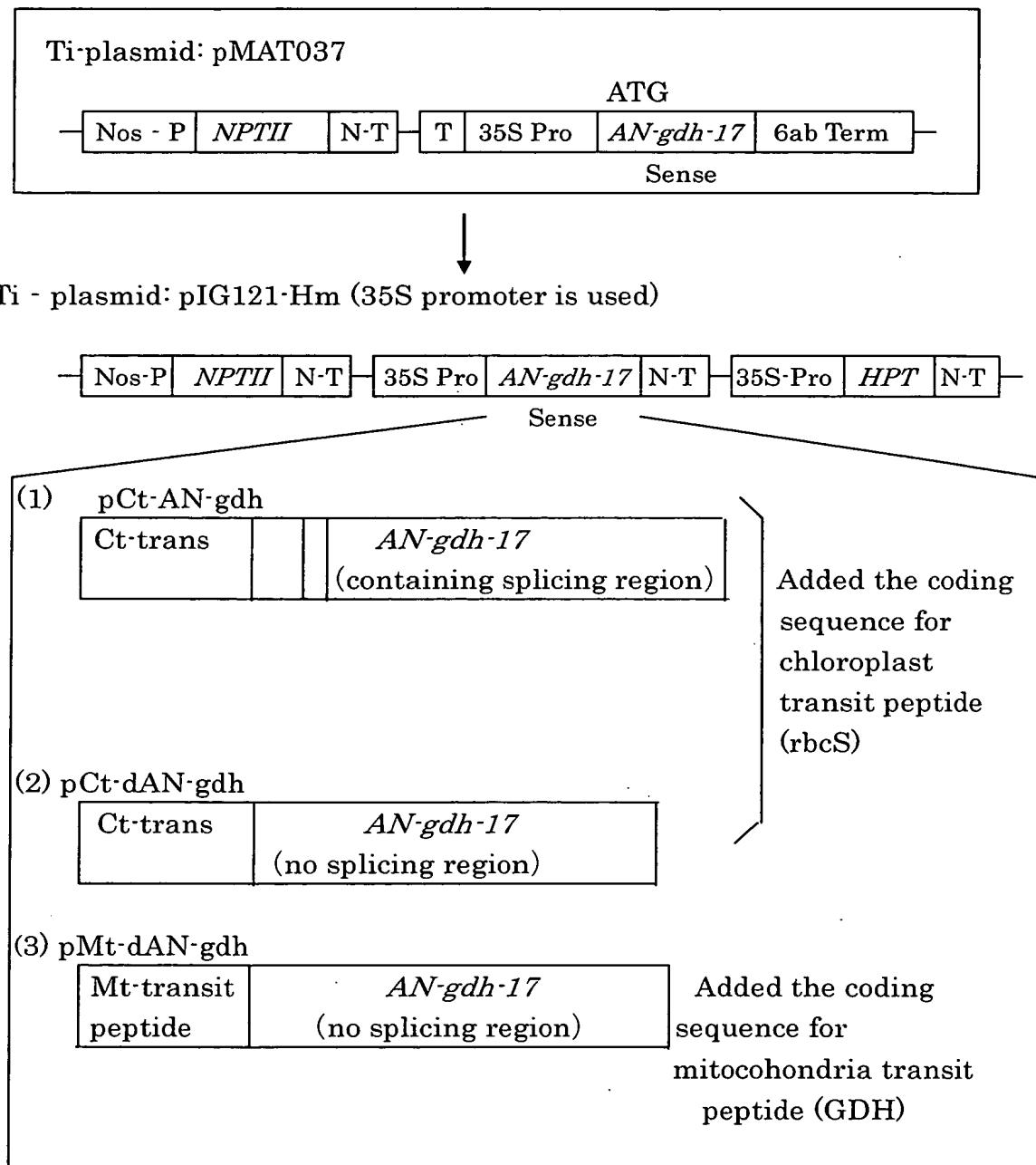


FIG.5

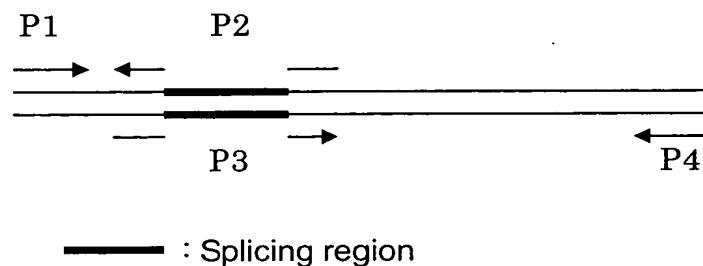


FIG.6

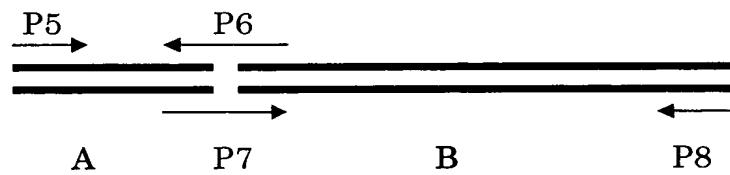


FIG. 7

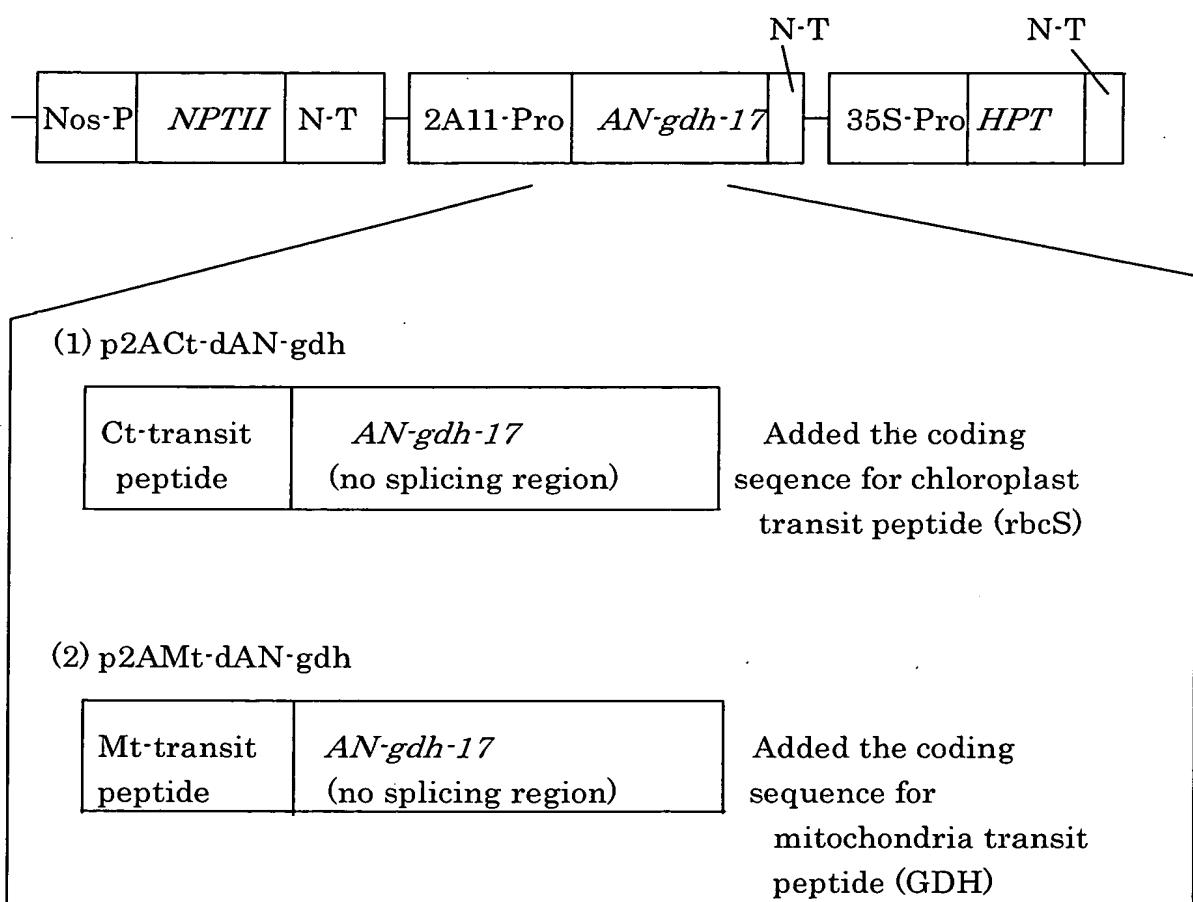


FIG.8

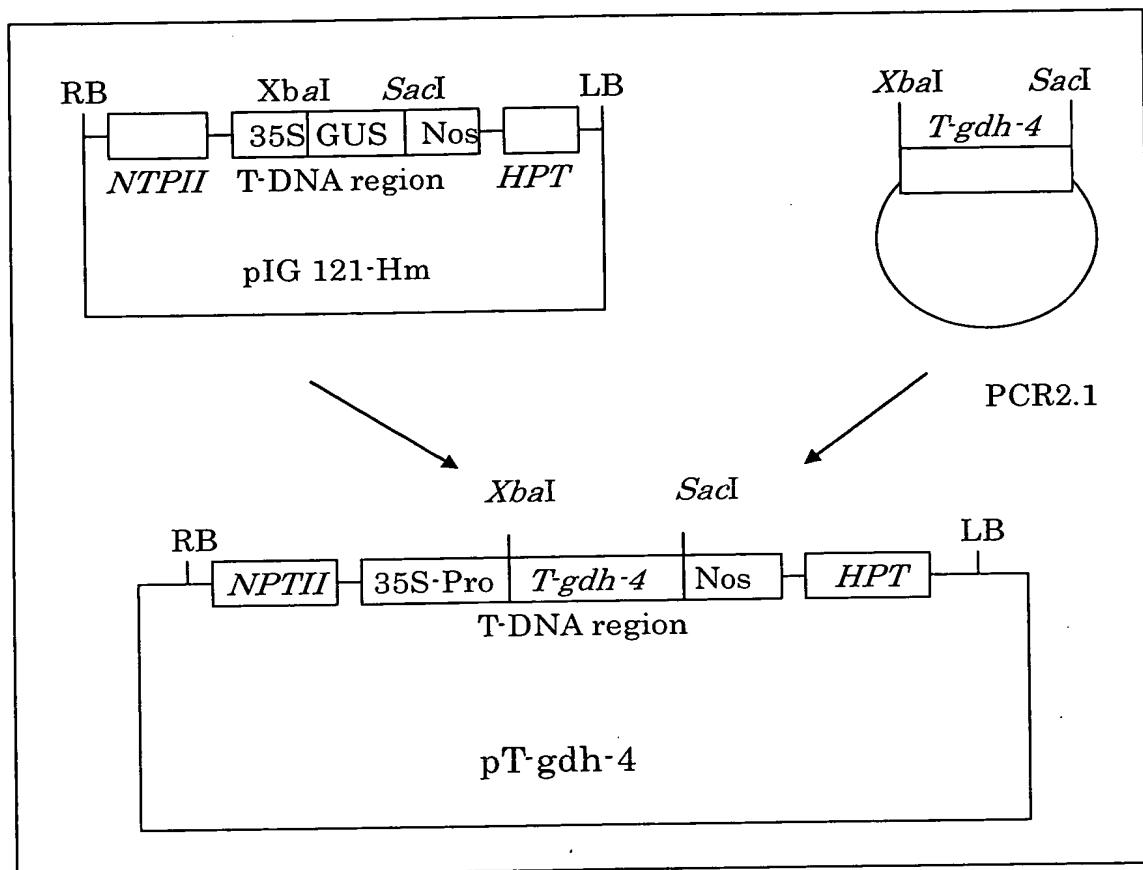


FIG.9

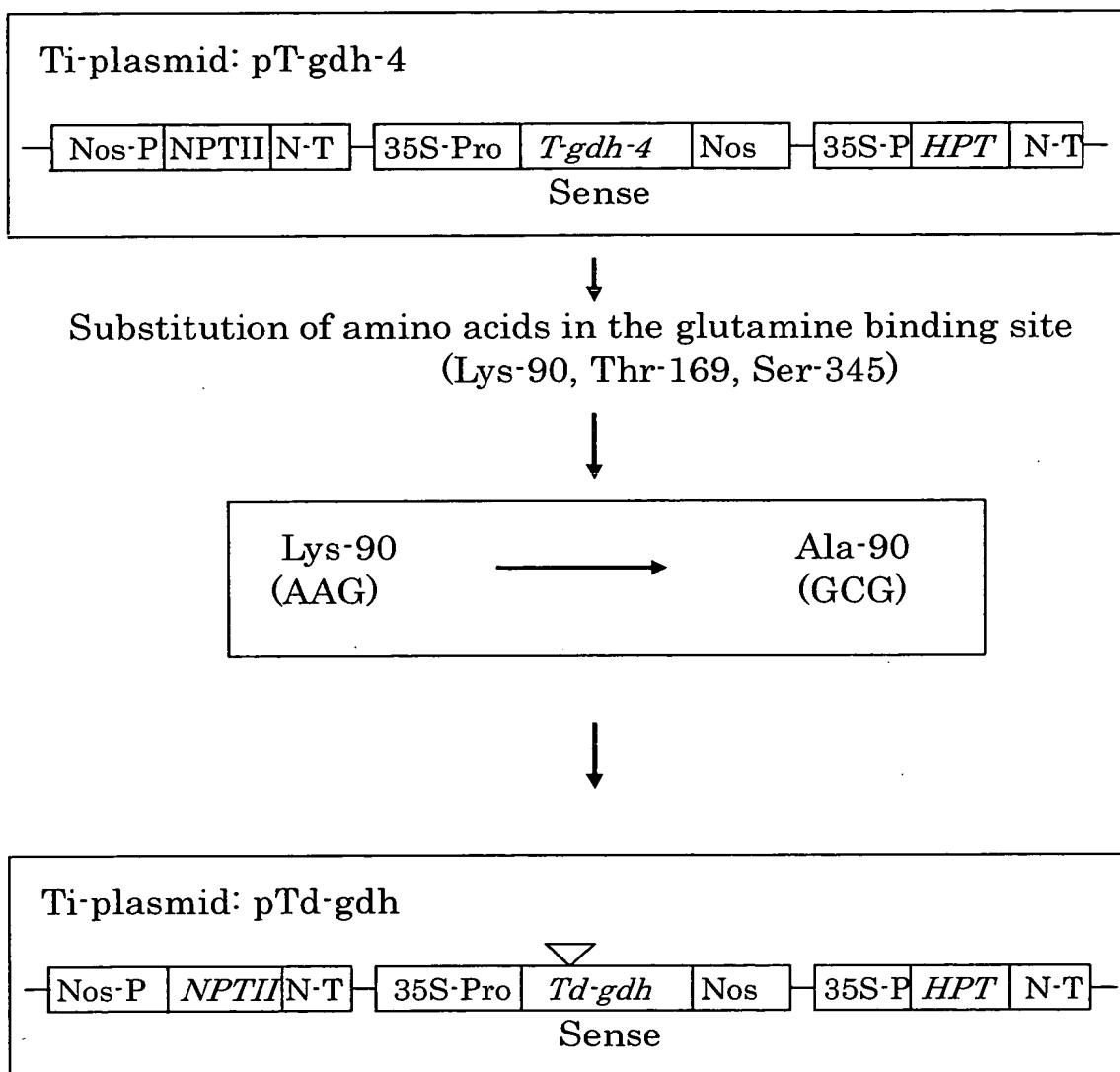
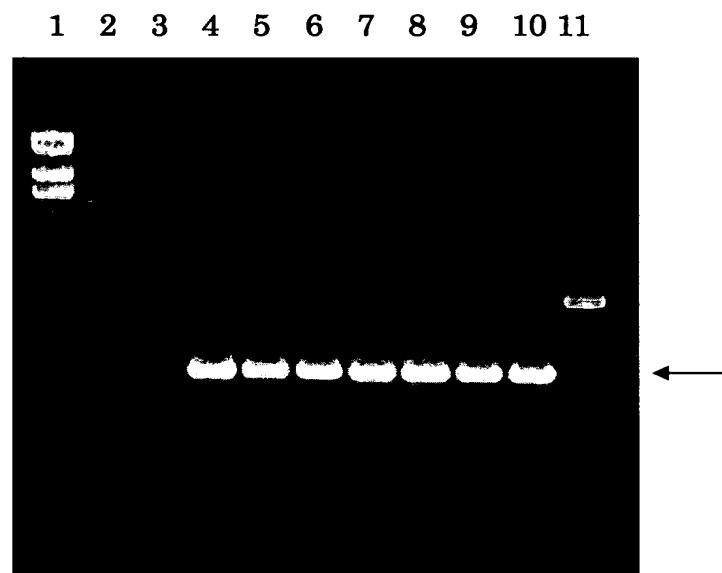


FIG.10



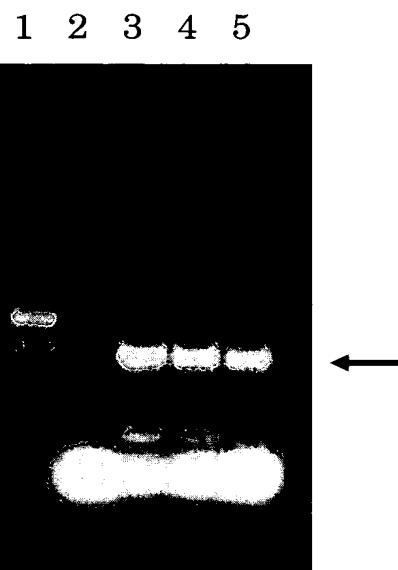
1.  $\gamma$ -*Hind*III marker
2. Untransformed tomato no. 1
3. Untransformed tomato no. 2
4. pMAT037 no. 1
5. pMAT037 no. 2
6. pMAT037 no. 3
7. AN-gdh-17 no. 6
8. AN-gdh-17 no. 8-2
9. AN-gdh-17 no. 15
10. AN-gdh-17 no. 17
11. 100bp marker

FIG.11



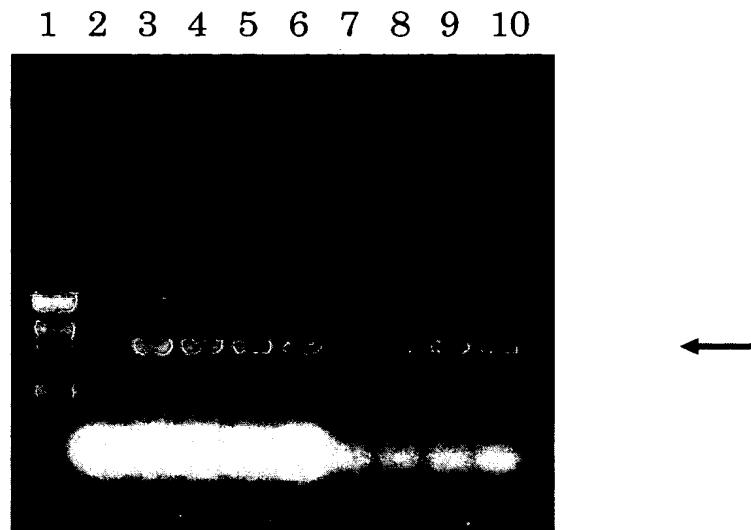
1.  $\gamma$ -HindIII marker
2. Untransformed tomato no. 1
3. Untransformed tomato no. 2
4. pIG121 no. 1
5. pIG121 no. 2
6. pIG121 no. 3
7. T-gdh-4 no. 2
8. T-gdh-4 no. 7-2
9. T-gdh-4 no. 9-2
10. T-gdh-4 no. 10
11. 100bp marker

FIG.12



1. 100 bp marker
2. Untransformed tomato (leaf)
3. AN-gdh-17 no. 6 (leaf)
4. AN-gdh-17 no. 15 (leaf)
5. AN-gdh-17 no. 6 (fruit)

FIG.13



1. 100 bp marker	2. Untransformed-tomato (leaf)
3. T-gdh-4 no. 2 (leaf)	4. T-gdh-4 no. 7-2 (leaf)
5. T-dgh-4 no. 9-2 (leaf)	6. T-gdh-4 no. 10 (leaf)
7. T-gdh-4 no. 2 (fruit)	8. T-gdh-4 no. 7-2 (fruit)
9. T-gdh-4 no. 9-2 (fruit)	10. T-gdh-4 no. 10 (fruit)

FIG.14

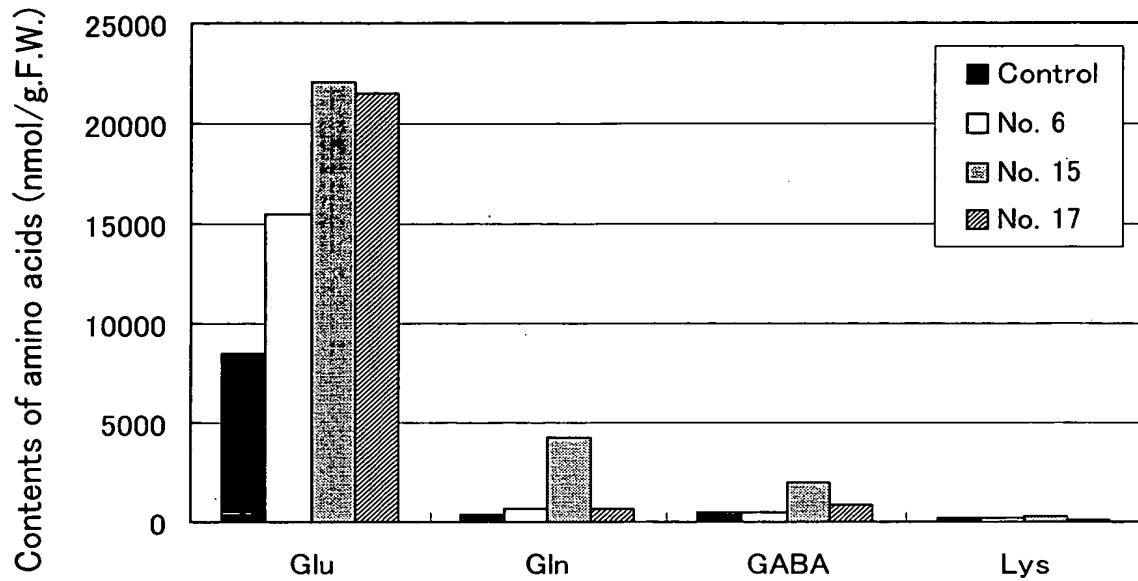


FIG.15

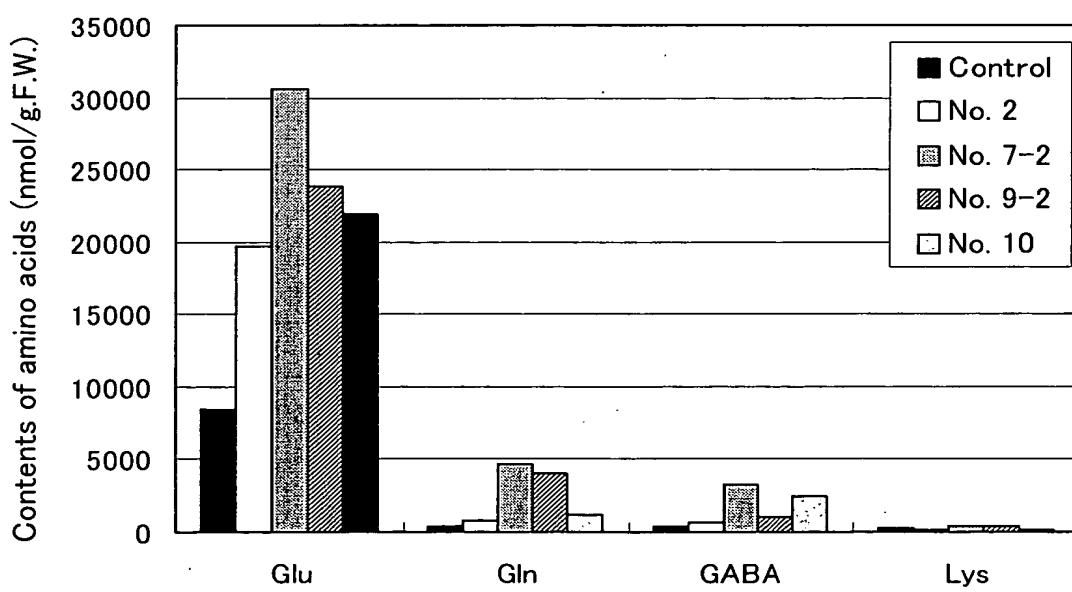
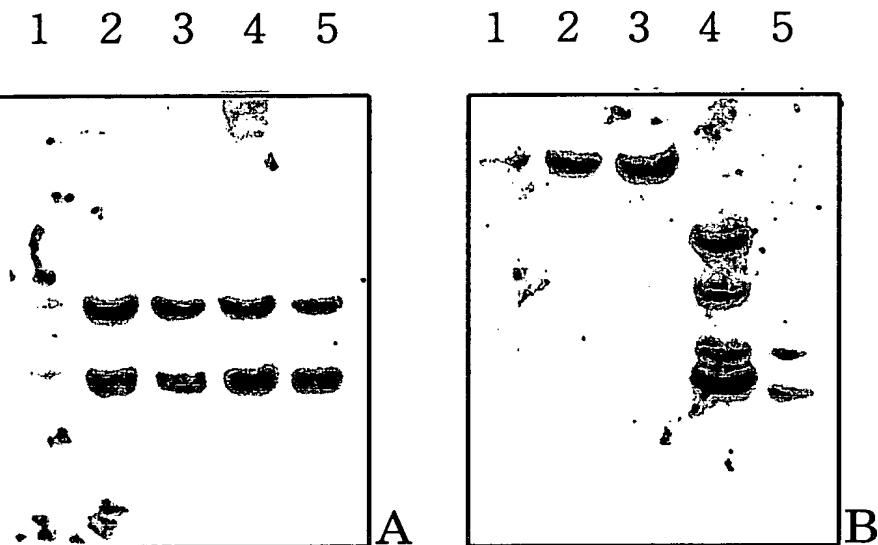


FIG.16



Lanes

1. Non-transgenic tomato
2. AN-gdh-17 No.1
3. AN-gdh-17 No.3
4. AN-gdh-17 No.15
5. AN-gdh-17 No.2.1

A. Total DNA( $15 \mu \text{g}$ ) was digested with *Bam*HI and *Eco*RI.

B. Total DNA( $15 \mu \text{g}$ ) was digested with *Xba*I.

FIG. 17

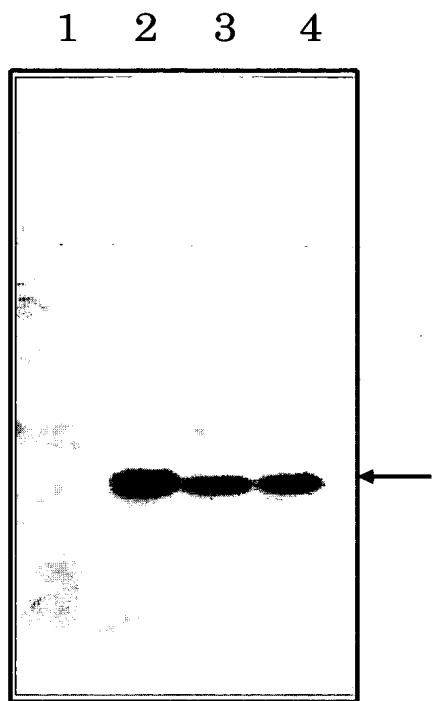
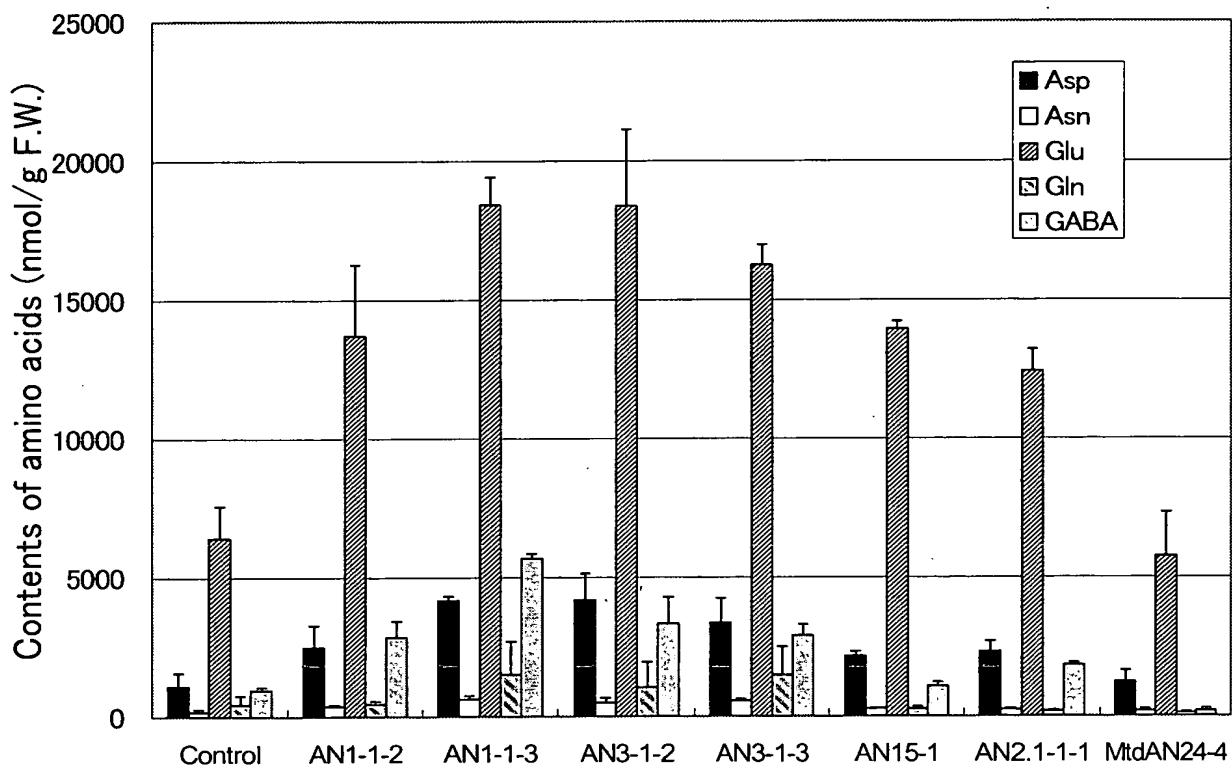


FIG.18

Amino acid contents in fruits of the progenies ( $T_1$ ) of  
AN-gdh-17 gene introduced tomato transformants



(n=3)

FIG.19

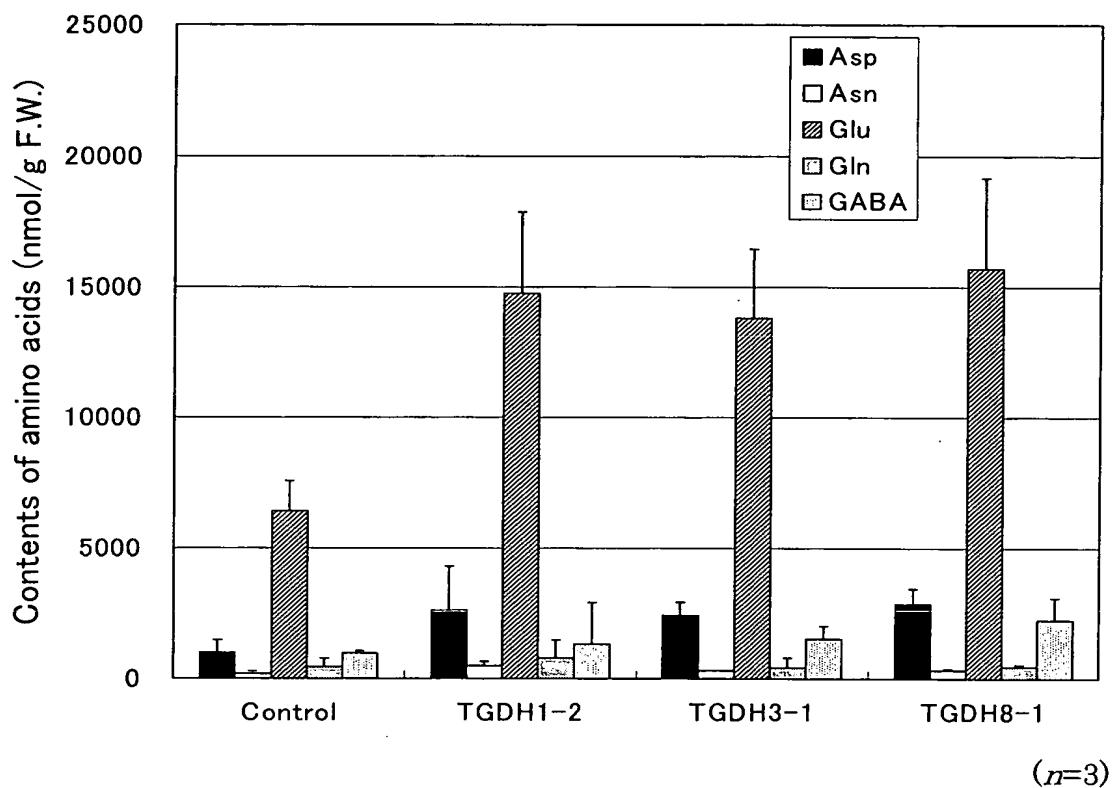


FIG.20

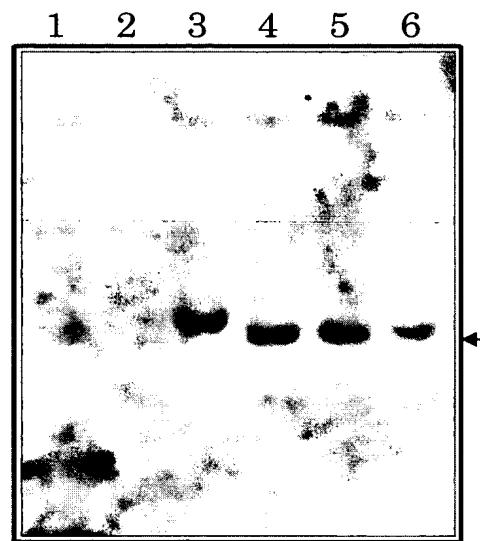


FIG.21

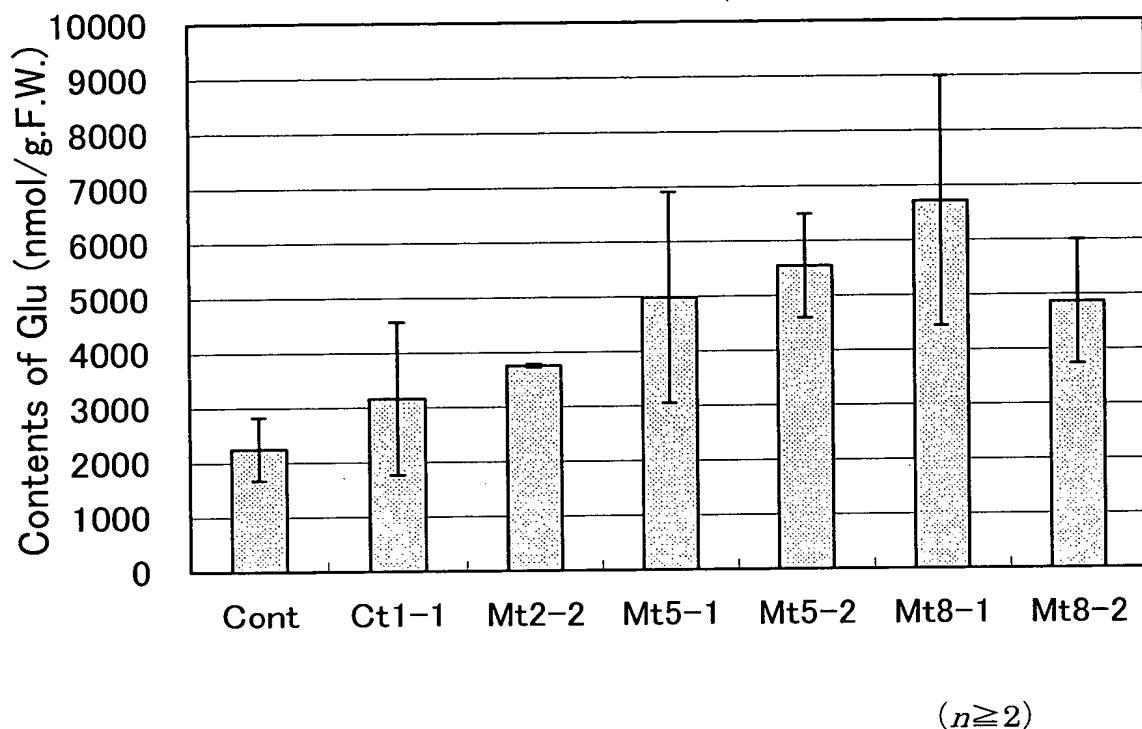


FIG.22

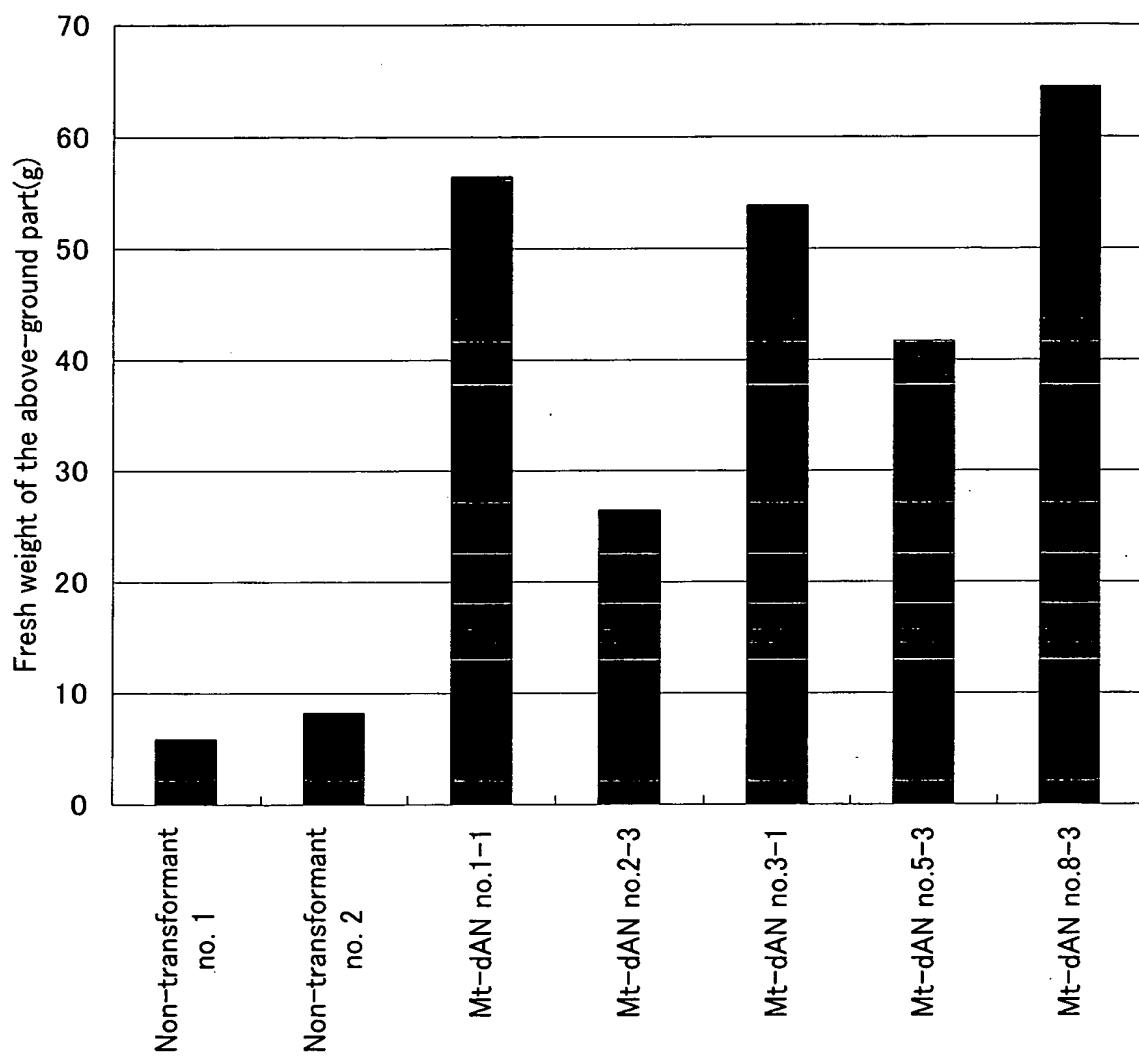


FIG.23

